CAT® REMAN
Caterpillar Remanufactured Products

T E C H N I C A L S U P P L E M E N T

Selection Flowchart for Engines, Short Blocks, Long Blocks and Cylinder Heads

Instructions for Selecting Reman Engine Products

Introduction:

This document provides instructions to assist dealer personnel in determining the availability of Reman engines, short blocks, long blocks and cylinder heads. The process of selecting a Reman engine option can be confusing. Hopefully, this systematic approach will help dealers provide more timely and accurate option information to the customer.

For most Reman products, a 1:1 equivalent is available. For example: for a 7Y4614 hydraulic rod assembly, one 0R number, 0R3609, services that part and that part only. With engines, long blocks and short blocks, these 1:1 equivalents do not always exist. Caterpillar remanufactures specific engine configurations. If a customer's arrangement does not correspond to any of these offerings, his configuration may be produced using a Reman option, similar to his engine, and changing parts as needed. Sometimes the part differences are small, such as lines and covers. Differences may also be large such as pistons, governors, and turbos. In each case, a judgment must be made on site as to whether it is necessary to change these parts and whether the effort/expense is justified.

Resource Overview:

The following is a brief description of the computer systems and paper resources used to identify Reman options with the methodology shown in the attached flow charts. All of these resources are available to dealers and are helpful in identifying engine options. Dealer personnel who are familiar with other Cat computer systems may find the needed information from other sources.

Cat Reman Products Guide:

Form Number SELD0200

This guide contains information on all facets of the Reman program including technical information. It remains one of the best references currently available and a valuable resource when making engine replacement decisions. The Technical Supplement contains many notes addressing some of the inconsistencies and cautions when selecting different options. Please read carefully.

Similar information is found in the PSK, which is more readily used by dealers, however, the Technical Supplements should be used as the safe source.

NPR: Numerical Parts Record Inquiry

This program is part of Morton's mainframe system and is consistently used by parts personnel. The NPR should reference the 0R number for a given production number and visa versa. For example, a 9N5166 (3208 NA truck arrangement) inquiry shows a 0R0975 Reman engine available. A 0R0975 inquiry shows 0R0975 is the remanufactured part for 9N5166.

Parts Books/Service Information System (SIS)

They provide picture illustrations and some consist listings. They are useful when comparing two parts from two different arrangements.

TMI - Technical Marketing Information: AIMS program on Cat mainframe system

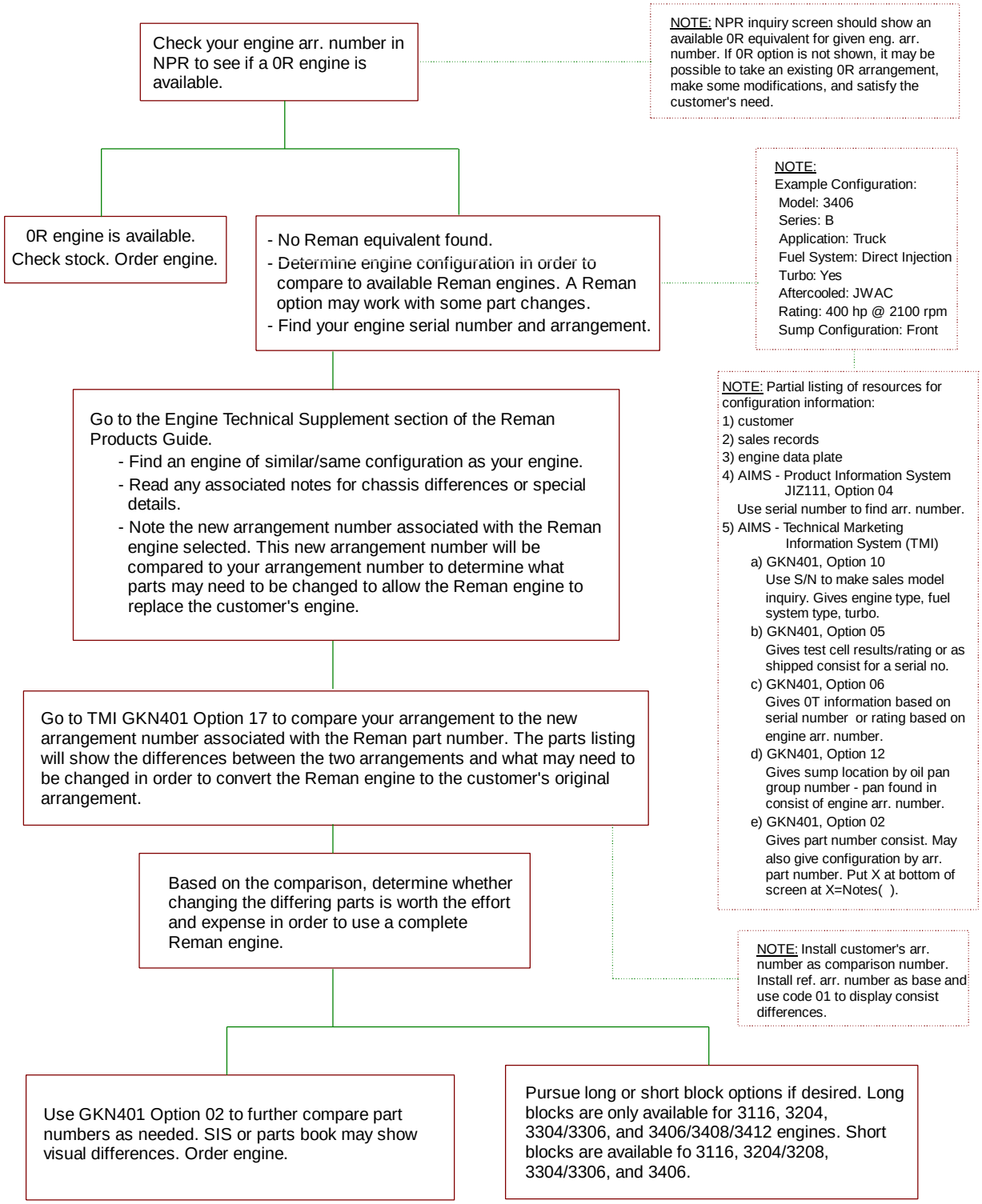
Form Number LEBQ0724 - User's Manual

This system contains a variety of engine information such as engine ratings, test cell results of individual engines, and part number consists. A compare consists function allows two part numbers to be compared and a listing of differing or similar parts to be generated. This is invaluable in determining what parts need to be changed in order for a Reman offering to be used. Service personnel typically use this program more frequently than the parts personnel. Find a TMI user within your dealership or request your security coordinator to grant you access to this system.

Final Comments:

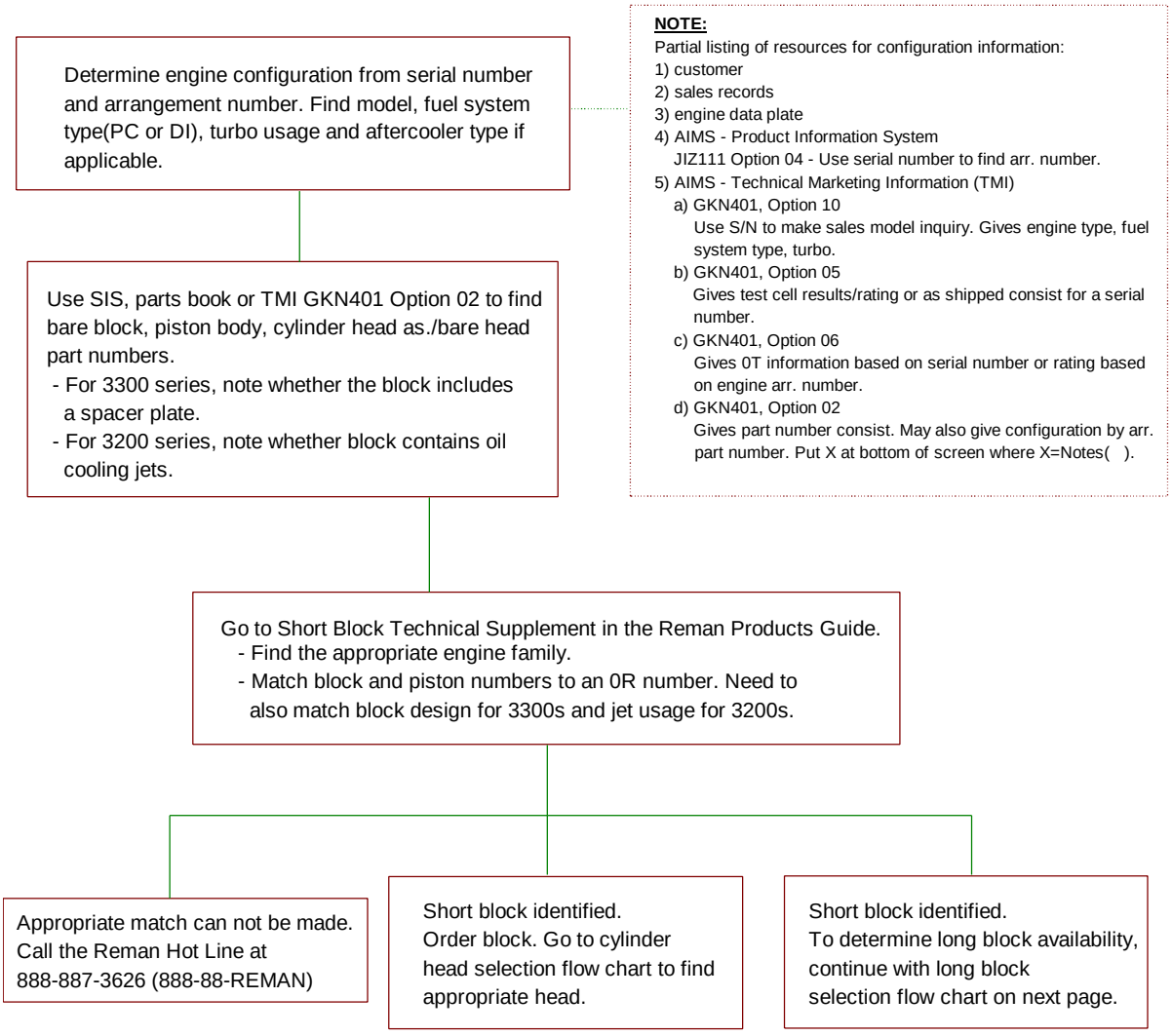
The attached flow charts may appear to be cumbersome to use at first. They are designed to help an inexperienced person learn the sequence in which to gather information and from what system/resource. Occasionally, information is needed which can only be accessed through Cat's engineering system. For those questions, other difficulties, or for help in understanding the methodology, please call the Reman Hotline on 888-887-3626 (888-88-REMAN).

REMAN COMPLETE ENGINE SELECTION FLOW CHART

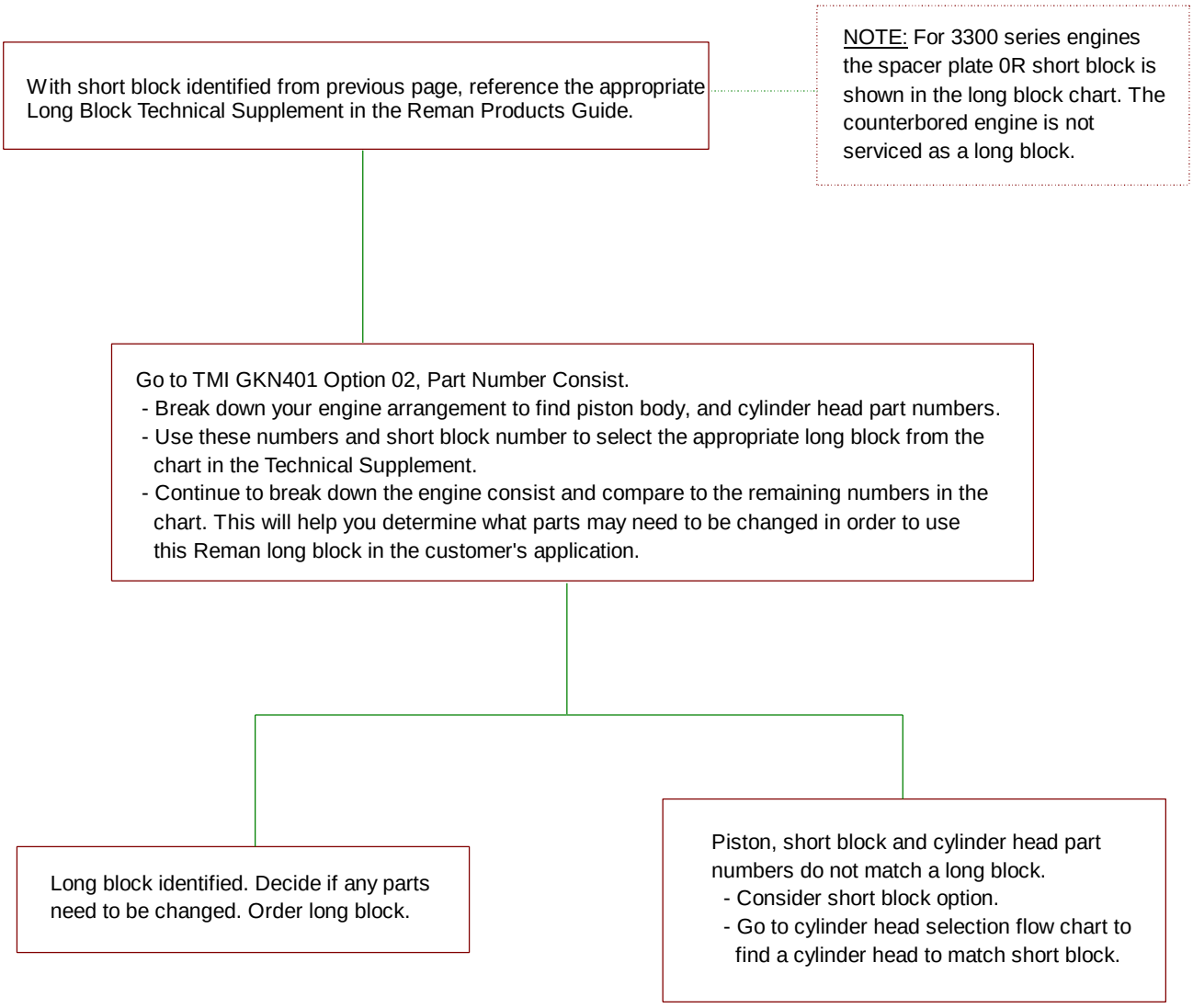

Check your engine arr. number in NPR to see if a 0R engine is available.
NOTE: NPR inquiry screen should show an available 0R equivalent for given eng. arr. number. If 0R option is not shown, it may be possible to take an existing 0R arrangement, make some modifications, and satisfy the customer's need.
0R engine is available. Check stock. Order engine.
- No Reman equivalent found.
- Determine engine configuration in order to compare to available Reman engines. A Reman option may work with some part changes.
- Find your engine serial number and arrangement.
NOTE:
Example Configuration:
Model: 3406
Series: B
Application: Truck
Fuel System: Direct Injection
Turbo: Yes
Aftercooled: JWAC
Rating: 400 hp @ 2100 rpm
Sump Configuration: Front
Go to the Engine Technical Supplement section of the Reman Products Guide.
- Find an engine of similar/same configuration as your engine.
- Read any associated notes for chassis differences or special details.
- Note the new arrangement number associated with the Reman engine selected. This new arrangement number will be compared to your arrangement number to determine what parts may need to be changed to allow the Reman engine to replace the customer's engine.
NOTE: Partial listing of resources for configuration information:
1) customer
2) sales records
3) engine data plate
4) AIMS - Product Information System JIZ111, Option 04
Use serial number to find arr. number.
5) AIMS - Technical Marketing Information System (TMI)
a) GKN401, Option 10
Use S/N to make sales model inquiry. Gives engine type, fuel system type, turbo.
b) GKN401, Option 05
Gives test cell results/rating or as shipped consist for a serial no.
c) GKN401, Option 06
Gives 0T information based on serial number or rating based on engine arr. number.
d) GKN401, Option 12
Gives sump location by oil pan group number - pan found in consist of engine arr. number.
e) GKN401, Option 02
Gives part number consist. May also give configuration by arr. part number. Put X at bottom of screen at X=Notes( ).
Go to TMI GKN401 Option 17 to compare your arrangement to the new arrangement number associated with the Reman part number. The parts listing will show the differences between the two arrangements and what may need to be changed in order to convert the Reman engine to the customer's original arrangement.
Based on the comparison, determine whether changing the differing parts is worth the effort and expense in order to use a complete Reman engine.
NOTE: Install customer's arr. number as comparison number. Install ref. arr. number as base and use code 01 to display consist differences.
Use GKN401 Option 02 to further compare part numbers as needed. SIS or parts book may show visual differences. Order engine.
Pursue long or short block options if desired. Long blocks are only available for 3116, 3204, 3304/3306, and 3406/3408/3412 engines. Short blocks are available fo 3116, 3204/3208, 3304/3306, and 3406.

REMAN SHORT/LONG BLOCK SELECTION FLOW CHART

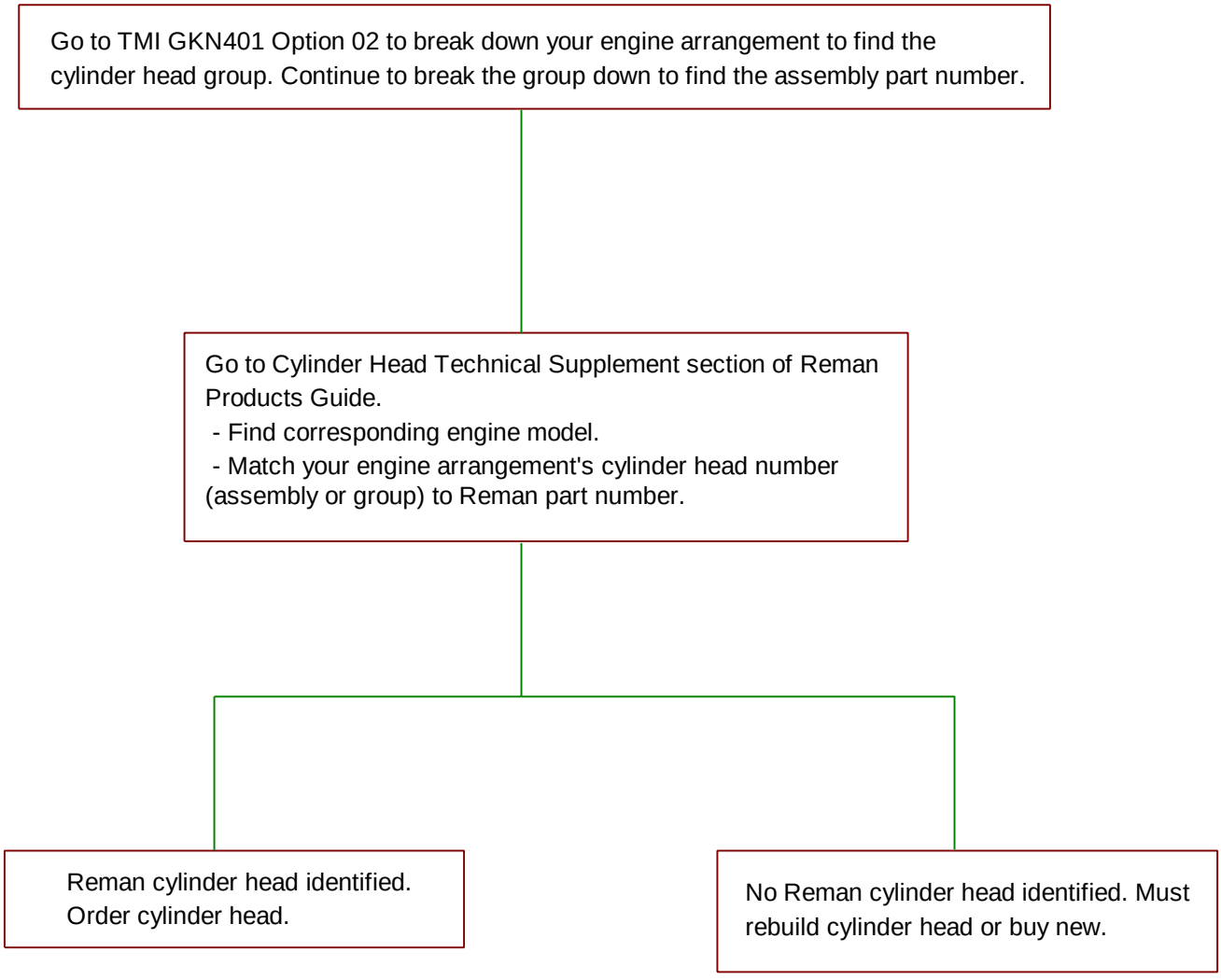
Use this chart when beginning the search for a short or long block. To determine long block availability, the short block must first be identified. The only exceptions are the 3408 and 3412 engines which have no short block options.


Determine engine configuration from serial number and arrangement number. Find model, fuel system type(PC or DI), turbo usage and aftercooler type if applicable.
NOTE:
Partial listing of resources for configuration information:
1) customer
2) sales records
3) engine data plate
4) AIMS - Product Information System
JIZ111 Option 04 - Use serial number to find arr. number.
5) AIMS - Technical Marketing Information (TMI)
a) GKN401, Option 10
Use S/N to make sales model inquiry. Gives engine type, fuel system type, turbo.
b) GKN401, Option 05
Gives test cell results/rating or as shipped consist for a serial number.
c) GKN401, Option 06
Gives 0T information based on serial number or rating based on engine arr. number.
d) GKN401, Option 02
Gives part number consist. May also give configuration by arr. part number. Put X at bottom of screen where X=Notes( ).
Use SIS, parts book or TMI GKN401 Option 02 to find bare block, piston body, cylinder head as./bare head part numbers.
- For 3300 series, note whether the block includes a spacer plate.
- For 3200 series, note whether block contains oil cooling jets.
Go to Short Block Technical Supplement in the Reman Products Guide.
- Find the appropriate engine family.
- Match block and piston numbers to an 0R number. Need to also match block design for 3300s and jet usage for 3200s.
Appropriate match can not be made. Call the Reman Hot Line at 888-887-3626 (888-88-REMAN)
Short block identified. Order block. Go to cylinder head selection flow chart to find appropriate head.
Short block identified. To determine long block availability, continue with long block selection flow chart on next page.

REMAN LONG BLOCK SELECTION FLOW CHART(cont.)


With short block identified from previous page, reference the appropriate Long Block Technical Supplement in the Reman Products Guide.
NOTE: For 3300 series engines the spacer plate 0R short block is shown in the long block chart. The counterbored engine is not serviced as a long block.
Go to TMI GKN401 Option 02, Part Number Consist.
- Break down your engine arrangement to find piston body, and cylinder head part numbers.
- Use these numbers and short block number to select the appropriate long block from the chart in the Technical Supplement.
- Continue to break down the engine consist and compare to the remaining numbers in the chart. This will help you determine what parts may need to be changed in order to use this Reman long block in the customer's application.
Long block identified. Decide if any parts need to be changed. Order long block.
Piston, short block and cylinder head part numbers do not match a long block.
- Consider short block option.
- Go to cylinder head selection flow chart to find a cylinder head to match short block.

REMAN CYLINDER HEAD SELECTION FLOW CHART


Go to TMI GKN401 Option 02 to break down your engine arrangement to find the cylinder head group. Continue to break the group down to find the assembly part number.
Go to Cylinder Head Technical Supplement section of Reman Products Guide.
- Find corresponding engine model.
- Match your engine arrangement's cylinder head number (assembly or group) to Reman part number.
Reman cylinder head identified. Order cylinder head.
No Reman cylinder head identified. Must rebuild cylinder head or buy new.

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